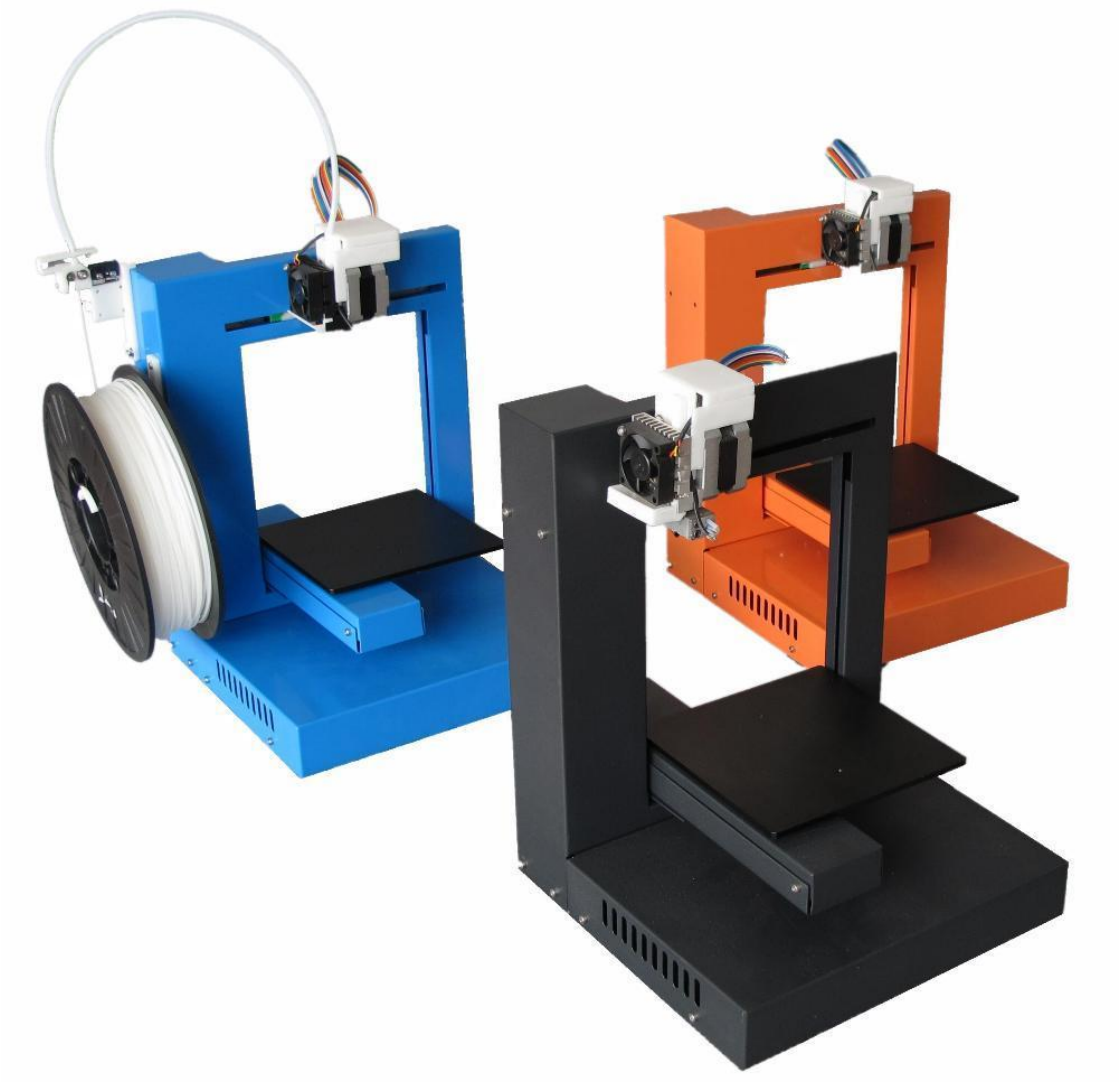
Personal Portable 3D Printer

UP! Quick Start Guide



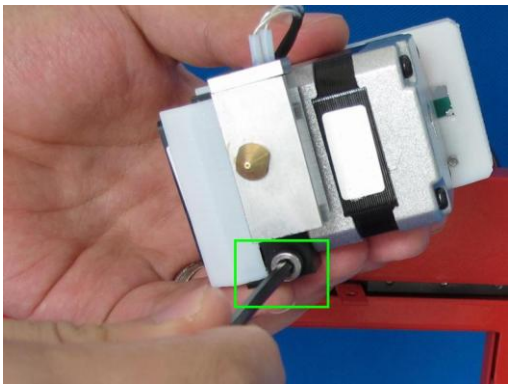
www.PP3DP.com

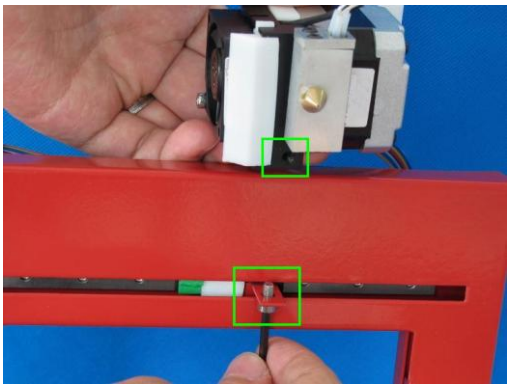
Quick Start Guide

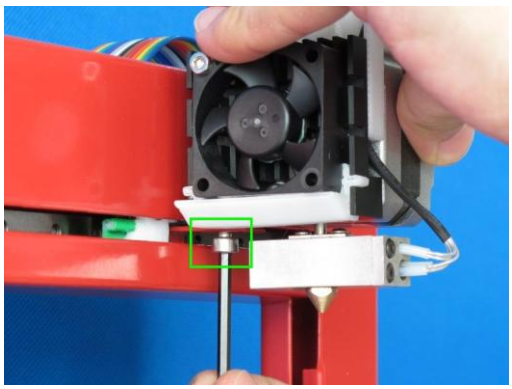
1. Assemble Printer

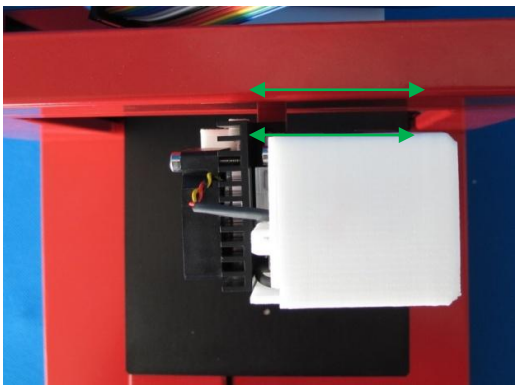
Open the box, take out the printer and accessories. Assemble the parts contained in the box as following procedure:

1. Unscrew the M4 screw from the extruder, then fix the extruder on the holder. Please make sure the extruder is parallel with Extruder axis.

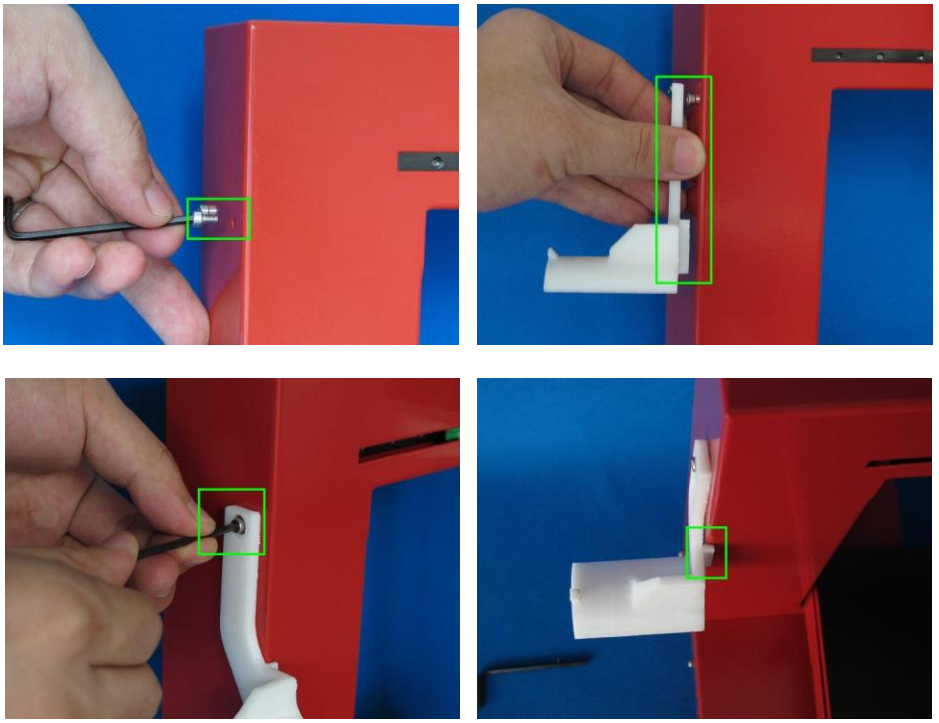




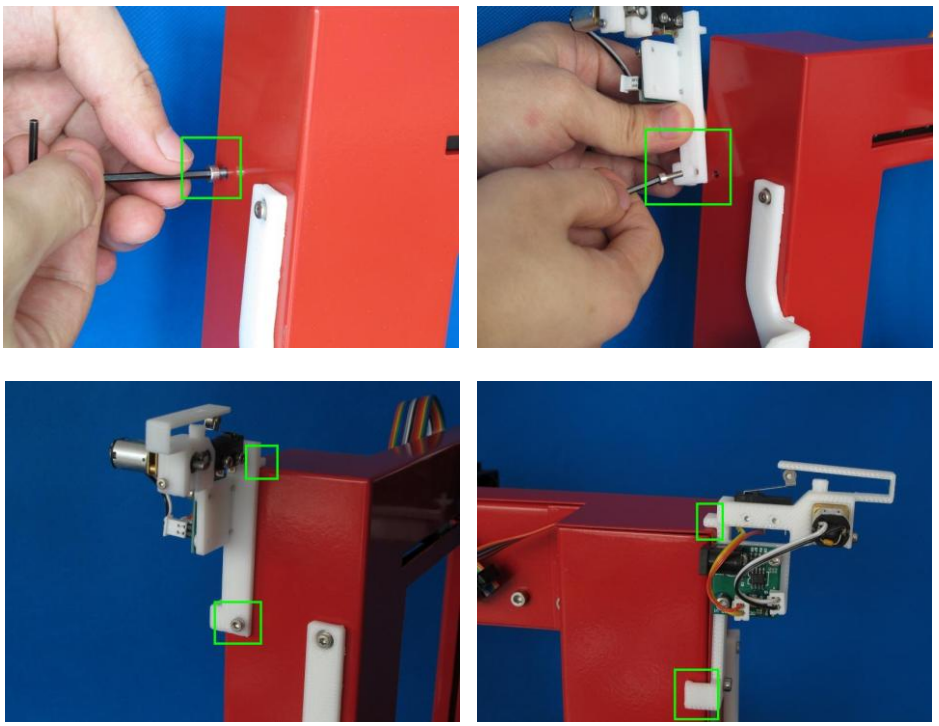




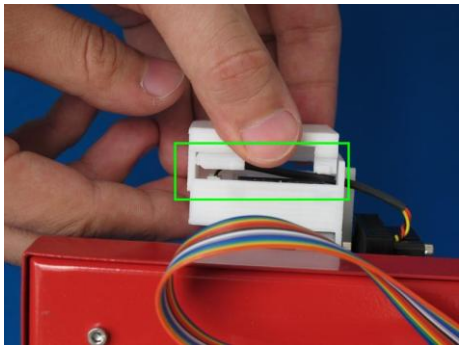
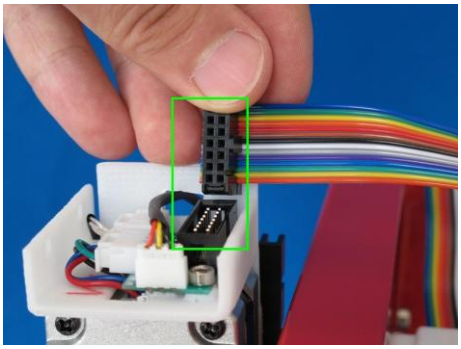
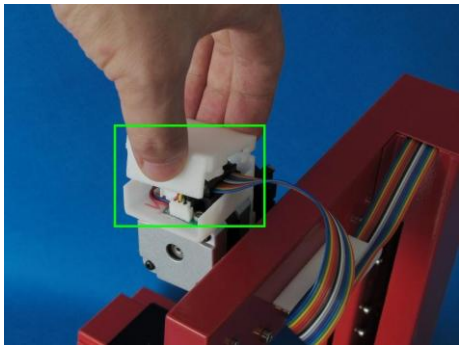
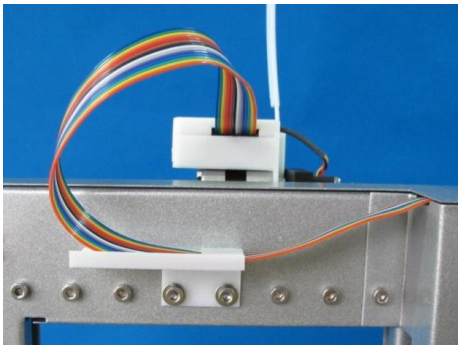
2. Install the ABS plastic spool holder. Unscrew the short M3 screw(M3X5) from printer, then fix the spool holder with a long M3 screw(M3X8). Please note that the spool holder should get stuck on the printer edge, so the ABS plastic spoon can be fixed on the printer tightly, and the filament supplier can work successfully.



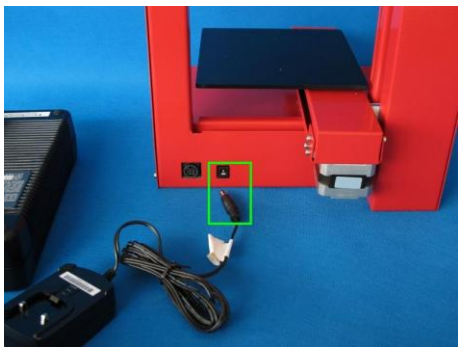
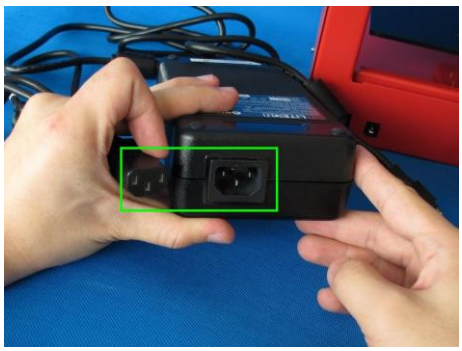
3. Install the filament supplier. Unscrew the short M3 screw(M3X5) from printer, then fix the filament supplier with a long M3 screw(M3X8).



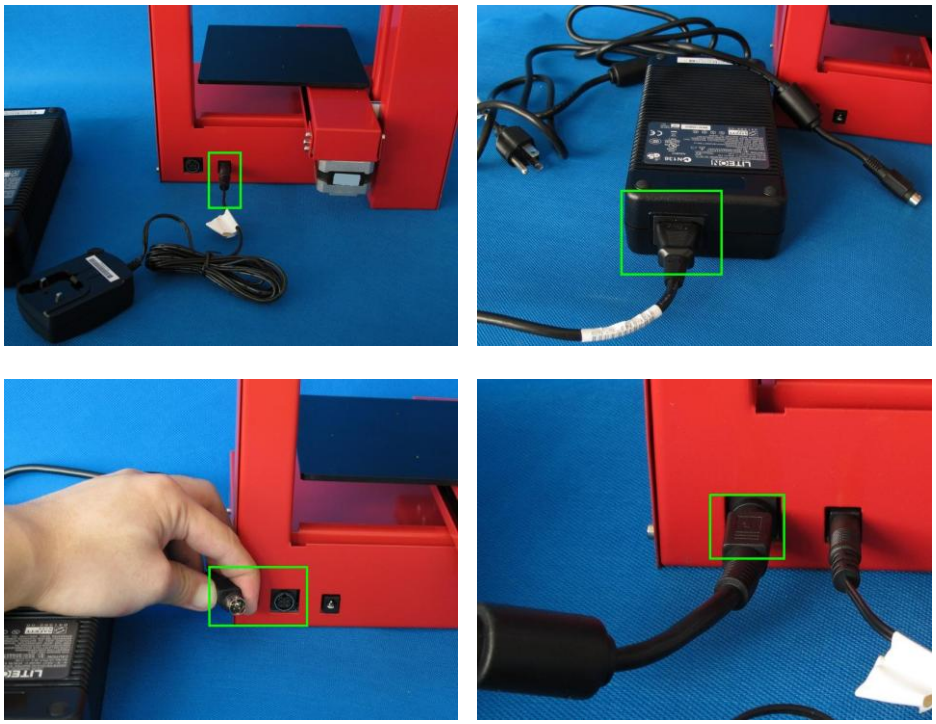
4. Install extruder cable(14-pin). Open the extruder upper lid, the 14-pin socket will be found. Then connect the plug and socket, and put on the upper lid.

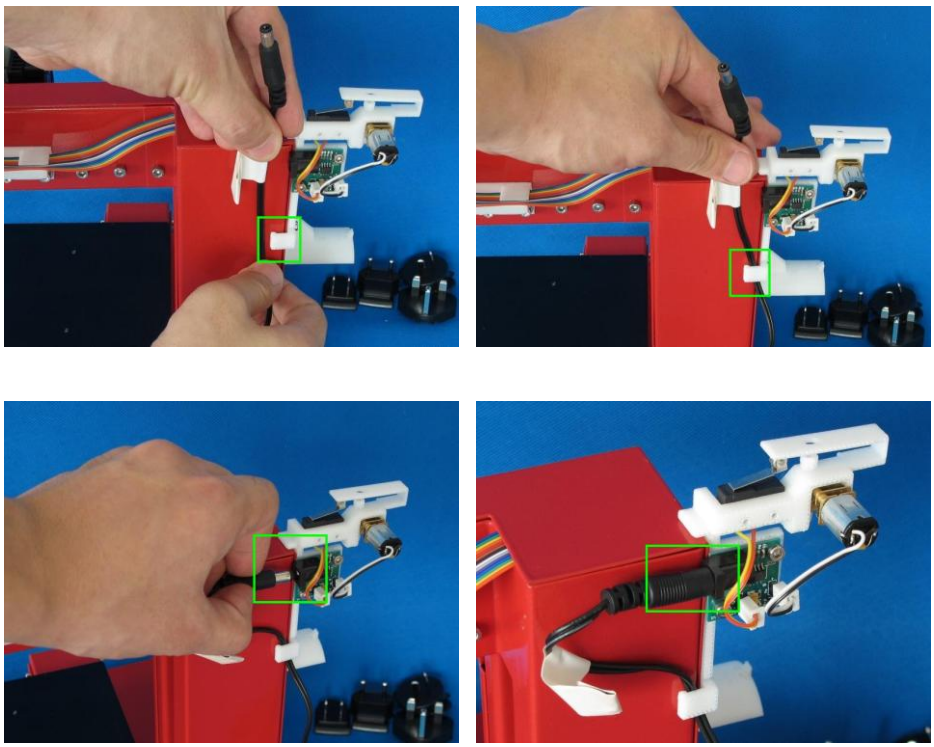
5. Connect all the power lines to the printer.
Firstly, link the Power adapter (5 V) to the middle socket.

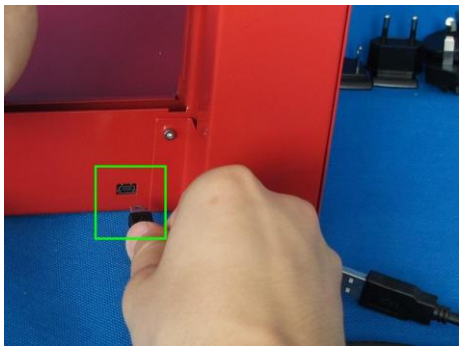
Secondly, link the Power adapter (20 V) to the power line, then connect the 4-pin slug to the socket. Please note that the flat side of the 4-pin slug which is marked with an arrow should be upturned.



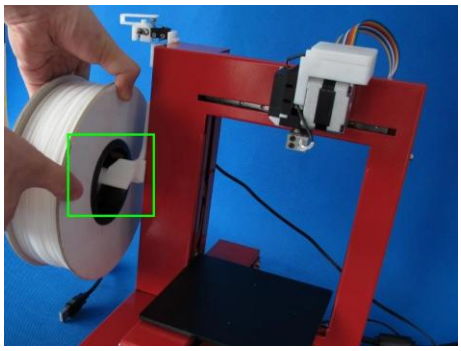
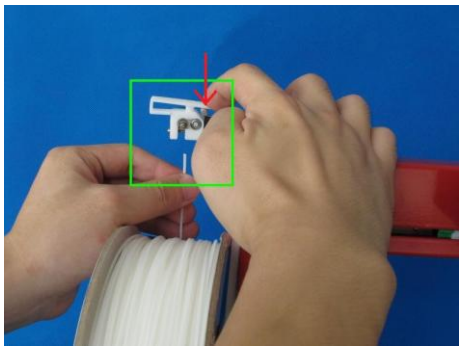
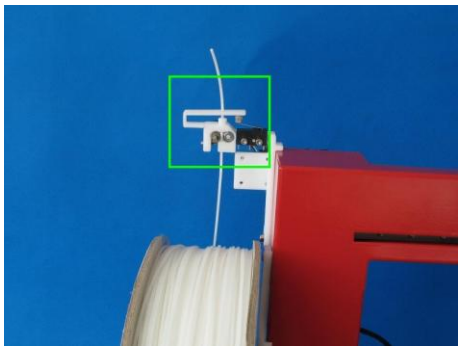
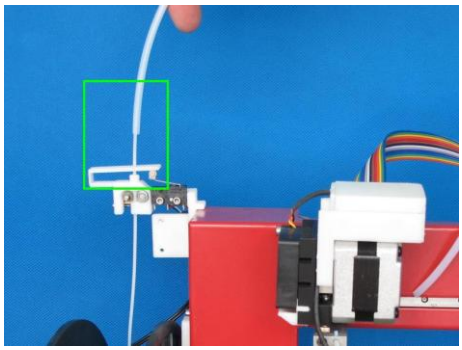
Thirdly, connect the power line to the filament supplier device. Please make sure the power line is got stuck on the side of filament.



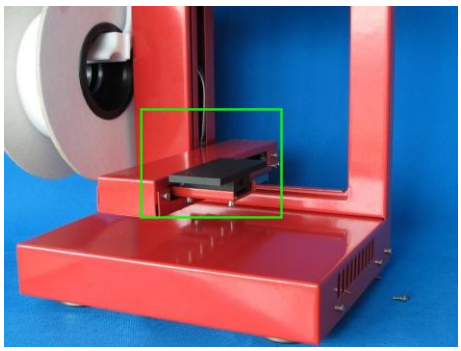
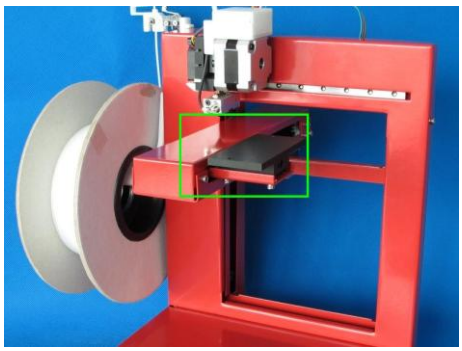
Lastly, connect the printer to a computer by USB cable. You could not connect the USB cable temporarily, until successfully install UP! software on computer (If connected, Windows system will find a new hardware and ask for installing dirver).

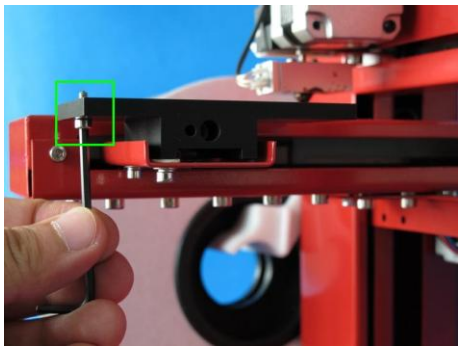


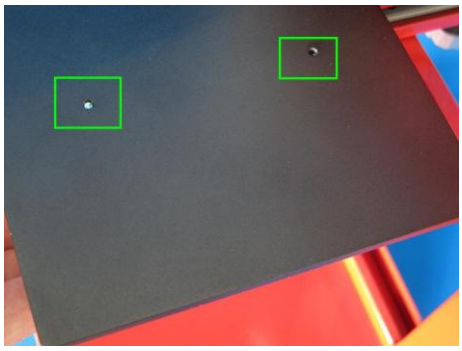
6. Put the ABS plastic spool on the holder, then put the ABS filament into feeder and press the travel switch, the filament will automatically feed material. Please remember to thrust the ABS into a filament tube.

7. Install a platform. Raise the platform axis to a certain height where is proper to screw. Please note the screw under the platform heating bed, don't screw it when take down the platform.

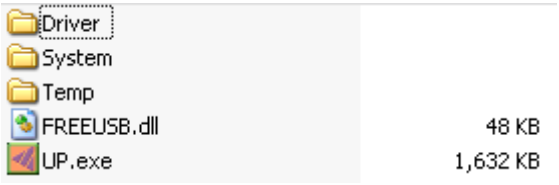







2. Installing the UP! software

Start UP Setup.exe and install the software in the specified directory (Defaulted C:\Program files\UP), and create a desktop shortcut. The following are included:



3. Installing drivers

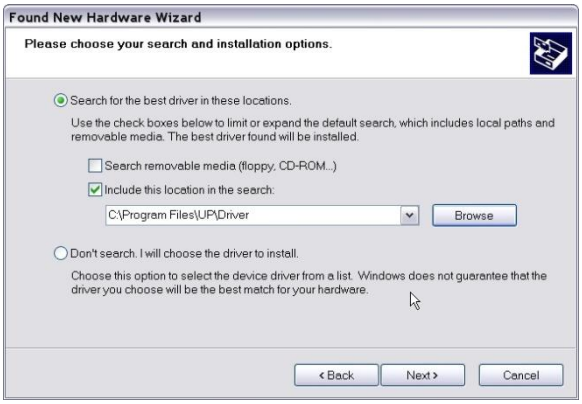
Connect the power cable to the back of UP printer, and then connect the computer and UP printer with USB cable. The system presents a new hardware is found and choose “No, not this time”.

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Read our privacy policy
Can Windows connect to Windows Update to search for software?
Yes, this time only
Yes, now and every time I connect a device
No, not this time
Click Next to continue.
< Back
Next >
Cancel

Choose “Install from a list or specific location (Advanced)”.

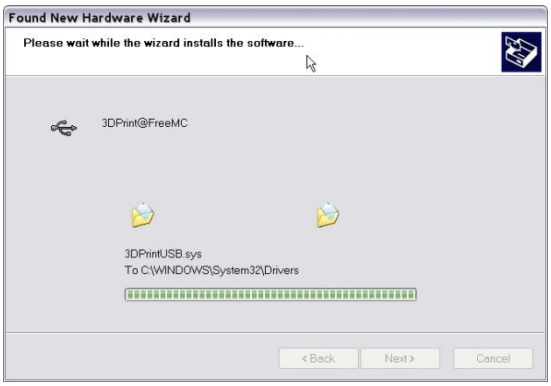
Found New Hardware Wizard
This wizard helps you install software for:
3DPrint@FreeMC
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

After that, click on “Next”. Click on “Browse”, and choose “C:\Program Files\UP\Driver”.


Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
C:\Program Files\UP\Driver
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

Click on “Next” and the following dialogue box pops up. Choose “Continue Anyway” and the system is installed automatically.

Hardware Installation
The software you are installing for this hardware:
3DPrint@FreeMC
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

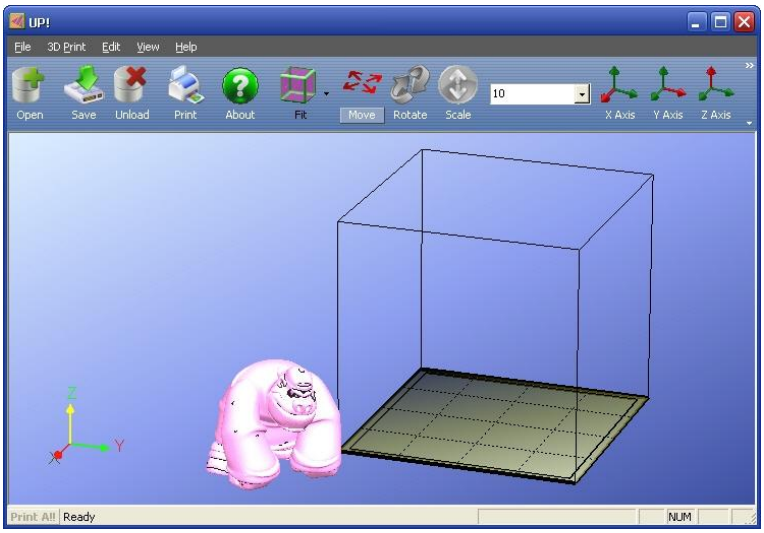


4. Loading 3D model

Click the icon on the desktop to start up the UP! software.

Click on

, navigate to and select the STL file that you have created (this software support two kinds of file formats STL and UP3. UP3 is the compression format of STL). The model is presented on the screen.



Unload the model: Choose the model you want to unload and click on

.

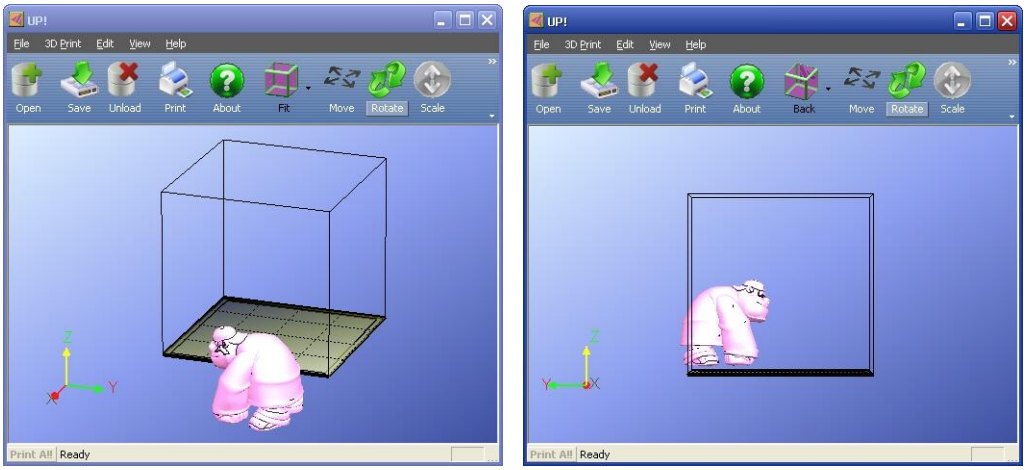
Save the model: Choose the model you want to save and click on

.

5. View the model

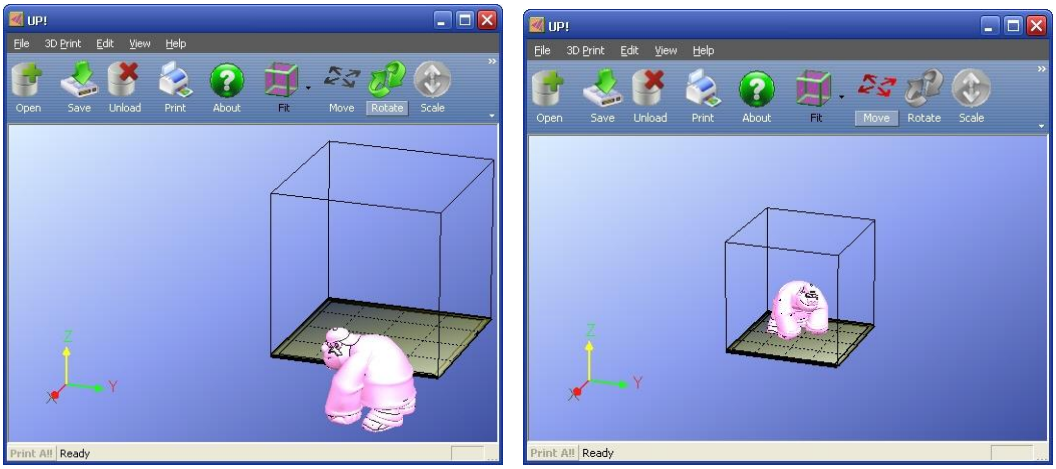
Observe the model on the window and use the mouse to change the display status.

Rotate**:** Press the middle mouse button and move, the model can be observed from different views.

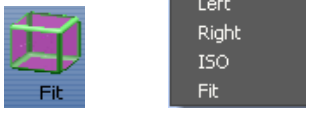

UP!
File 3D Print Edit View Help
Open Save Unload Print About Fit Move Rotate Scale
Print All Ready
UP!
File 3D Print Edit View Help
Open Save Unload Print About Back Move Rotate Scale
Print All Ready

Move**:** Press CTRL and middle mouse button at the same time and move, translation is achieved.

Scale**:** Rotate the mouse wheel, the model can be zoom in or out.

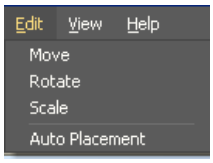

UP!
File 3D Print Edit View Help
Open Save Unload Print About Fit Move Rotate Scale
Print All Ready
UP!
File 3D Print Edit View Help
Open Save Unload Print About Fit Move Rotate Scale
Print All Ready

View**:** The system has 8 preset standard views. Click on "Fit" to choose.

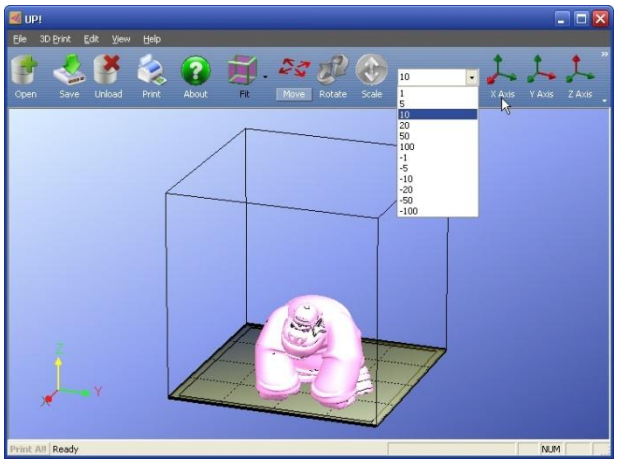


6. Model Transformation

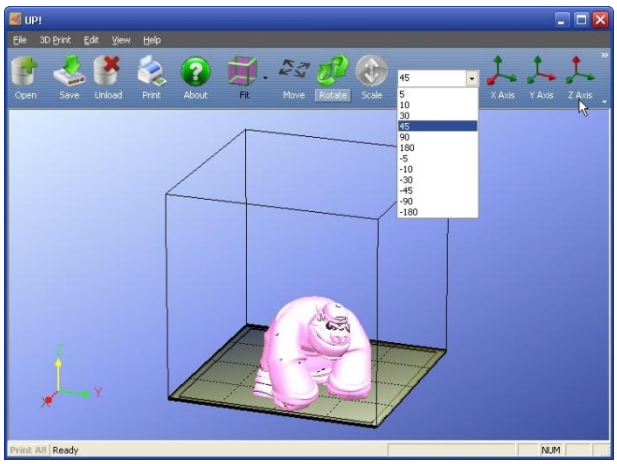
Model Transformation can be realized through “Edit” menu and toolbar:



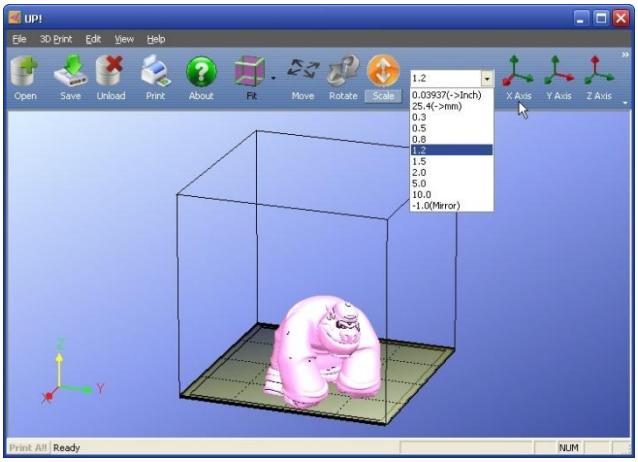
Move: Click on the button “Move”, choose or input the distance and then choose the axis.



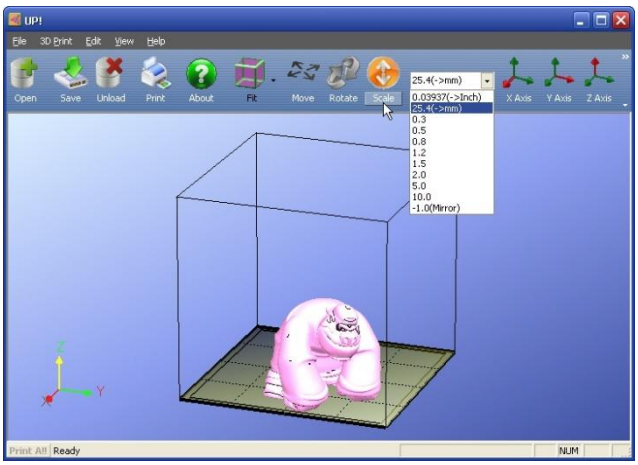
Rotate: Click on “Rotate” on the toolbar, choose or input the angle, and then choose the axis.



Scale： Click on “Scale”, choose or input the scaling, and then choose the axis(solitary scale) or click “Scale” again(uniform scale).



Unit Conversion (from inch to mm): Magnify the whole model for 25.4 times. Procedures: Click on "Scale" on the toolbar. Choose25.4 (->mm), and then click on the "Scale" button again.



7. Placing the model

Auto Placement: Click on “Auto Place” button or “Edit-> Auto placement” menu to place the model automatically. When there is more than one model, “Auto Place” is recommended.

Moving by Hand: Choose the target model by the left mouse button, then press CTRL, and at click left button again (not released). Move the mouse and drag the model to the position.

Moving through

: Click on the button, choose or input the distance, and finally choose the axis.

Note: When more than one model is displayed, the gap between each other is about 12mm to prevent adhesion.

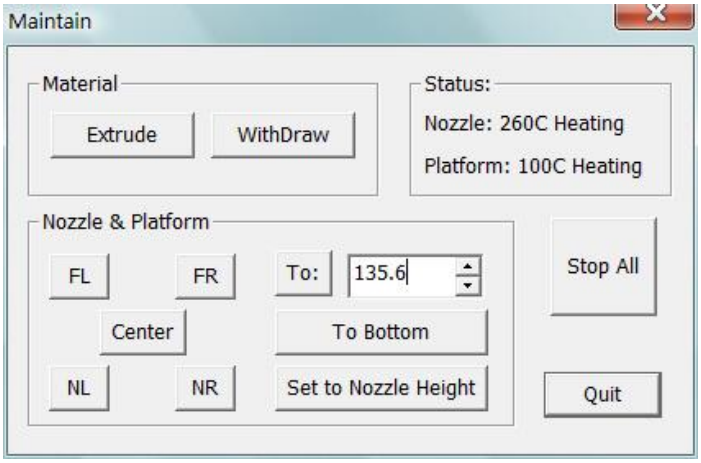
8. Printer Initialization and Maintain

Initialize

Connect the power cable and USB cable to the back of the printer and connect the power cable to the dedicated power outlet. The printer must be initialized before printing. click menu “3D print->Initial” to initialize the printer. The printer buzzes three times at the beginning, and the platform is lowered to the bottom. Then the platform moves forth and back and the nozzle moves left and right. When all the movement stops, the printer buzzes once more again. Initialization is finished.

Maintain

Click on “3D Print->Maintain” and the following dialogue box pops up.



Extrude: Squeezing out the ABS material. Click on this button, the temperature is getting higher. When the temperature is above 260℃, the printer buzzes, and the silk is squeezed out softly and continually.

Withdraw: Pulling out the ABS material. When the temperature is above 260℃， the material is withdrawn from nozzle. After that the printer buzzes again.

Status: Displaying the temperature of nozzle and platform, as well as if they are heated.

Stop All: Stopping heating and all other movement of the printer.

Nozzle & Platform: Five buttons（FL, FR, Center, NL, NR） on the left control the position of the

nozzle and the platform.

To: it means lifting the platform to a certain height. It is mainly used to calibrate the nozzle height. After calibration, input the value to the nozzle box in “Setup” dialogue.

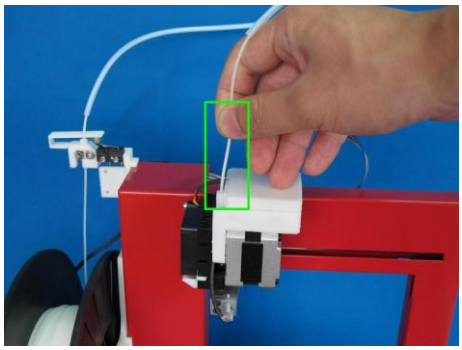
Bottom: it means descending the platform to the lowest position.

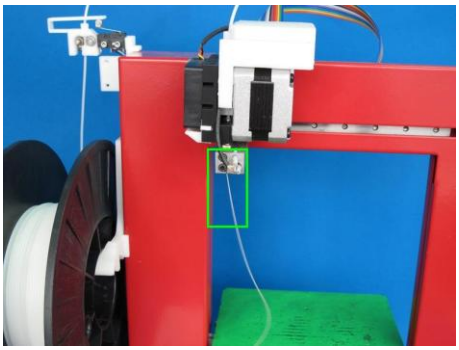
The best position of the platform is 0.2mm below the nozzle. Adjust the height of the nozzle by “To” until it is about 0.2 mm below the nozzle.

Set to Nozzle Height: set current height value to nozzle height.

9. Extude ABS

Find a material lead-in tube on extruder, and put the ABS into it, Then press “Extrude” button in the maintain dialogue. When the printer beeps, push the filament into the hole with a little strength and the extruder will extrude material automatically.

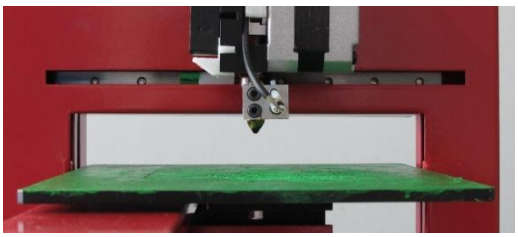




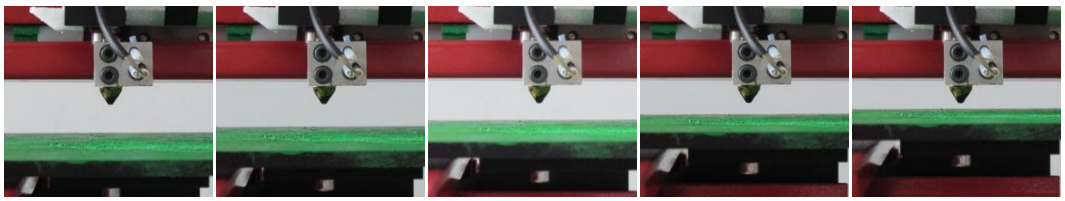
10. Set nozzle height

The platform rise to **Nozzle Height** position before printing, and the first layer will be printed. The best position of the platform is where it is 0.2～0.3mm below the nozzle. If the nozzle is too close to the platform (if there is no space between the two) it is difficult to extrude the material. If the gap is too wide, the model can not be stick to the platform firmly, and can be deformed or moved easily.

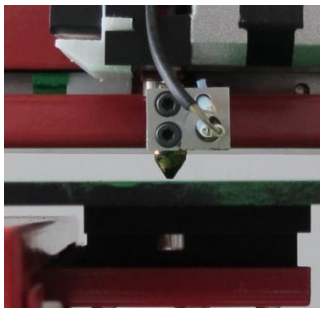
1. Select menu"3D Printer->Maintain", open maintain dialog
2. Click "Center" button, move the extruder and platform to center.
3. Input "125" in edit box, then click "To" button, rise the platform to 125mm height.
4. Observe the gap between the nozzle and the platform by eye, estimate the distance.

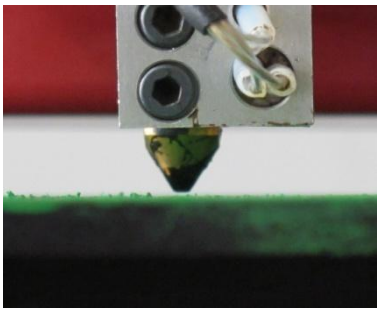


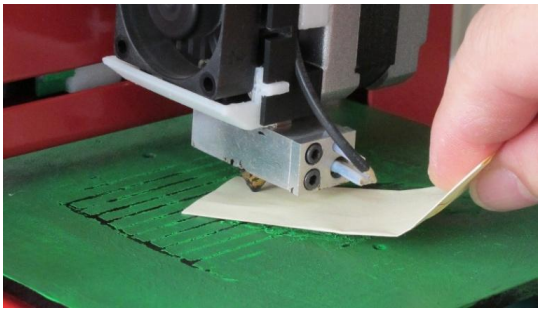
5. Input "127" in edit box, then click the "To" button, rise the platform to 127mm.
6. Input 129/131/133/…,click "To" button, until the gap is small than 2mm.



7. Increase the figure by 0.5 or 0.1 until the gap is near 0.2~0.3mm. Insert 2 or 3 sheets paper into the gap, it will help you to measure the gap.





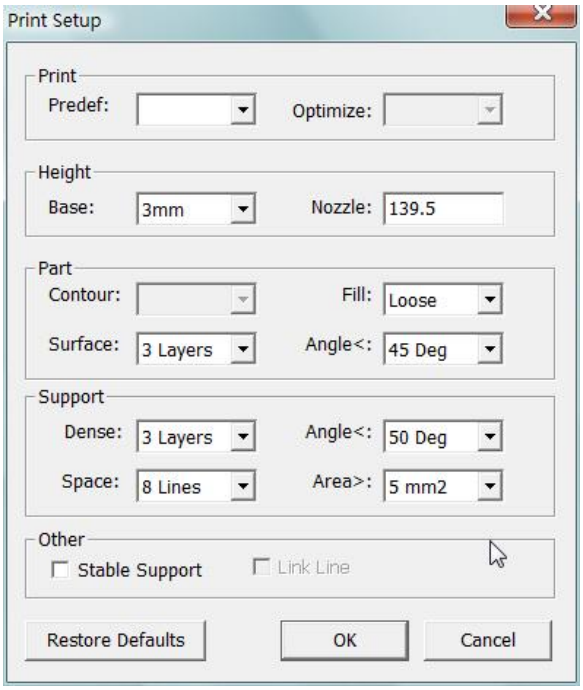


8. Click "Set to Nozzle Height" to set the current value as Nozzle Height, then click "bottom" button to drop the platform.

- **The nozzle height should be reset after install new extruder.**
- **Once the distance is set, the system saves the height data automatically. It needs not to be set again.**

11. Setup the parameters

Click on “Setup” on “3D Print->Setup”, the following dialogue box pops up.

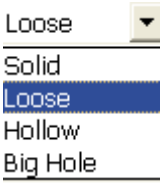


Predef: the figure indicates the Layer thickness

Base: the figure indicates the thickness of the raft.

Nozzle: The figure indicates the height of the nozzle.

Fill: There are four ways to adjust the inner infilling density, including Solid, Loose, Hollow, and Big Hole.



Click on Ok and the parameters are set.

12. Printing

Click on “Print” on “3D Print->Print” and the dialog pops up. Make sure the printing parameters are right. Then click on “OK”, the system begins to print.

When the printer finishes printing and beeps ready, remove model off the platform with shovel gently. Hold the platform to prevent the crossbar from suffering strong press. Please remember to wear a pair of gloves. If the platform is pushed moving unintentionally, please initial the printer. When the model is removed, put a thin layer of coat in its place.